

IN THE CLAIMS

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1. (Currently Amended) A method for scheduling a download from a server computer to a client computer, the method on the client computer comprising steps of:

obtaining a first threshold time value;
obtaining a second threshold time value;
pinging at least one server to calculate locally at the client computer a response time between the client computer and the server;
obtain percentage of CPU utilization of the client;
calculating a weighted result of the response time and the CPU utilization;
determining locally at the client computer a time for performing a download between the first threshold time value and the second threshold time value based on the weighted result.

2. (Currently Amended) A method according to claim 1, wherein the step of determining a time comprises a sub-step of:

generating locally at the client computer selecting a random time between the first threshold time value and the second threshold time value.

3. (Currently Amended) A method according to claim 2, wherein the said sub-step of generating locally at the client computer selecting a random time further comprises sub-steps of:

selecting a random number; and
selecting a random time between the first threshold time value and the second threshold time value, based on the random number, the first threshold time value and the second threshold time value.

4. (Currently Amended) A method according to claim 1, wherein said step of the determining a time further comprises sub-steps of:

obtaining one or measures of local resource availability at the client computer including a count of the number of other downloads underway; and

comparing the one or more measures to one or more corresponding preselected limits.

AI 5. (Currently Amended) A method according to claim 4, wherein ~~said step of the calculating a weighted result of the response time and the CPU utilization~~ obtaining one or more measures comprises a sub-step of:

~~obtaining a measure of ping response time between the client and the server~~

calculating a weighted result of the response time and the CPU utilization and one or more measures of local resource availability.

6. (Currently Amended) A method according to claim 4, wherein the calculating a weighted result ~~said step of obtaining one or more measures~~ comprises a sub-step of:

calculating a weighted result using the equation of

$$\text{WS} = \text{PRT} * \text{PRTW} + \text{DC} * \text{DCW} + \text{CPU} * \text{CPUW}$$

wherein,

PRTW is the response time weight for pinging the server,

DC is the count of number of downloads underway,

DCW is a weight for the count of number of downloads underway,

CPU is the percentage of CPU utilization,

CPUW is a weight for the percentage of CPU utilization, and

WS is the weighted result

~~obtaining a measure of client computer percentage of CPU utilization.~~

7. Currently Amended A method according to claim 4~~6~~, wherein ~~said step of obtaining one or more measures~~ comprises a sub-step of the response time weight of PRTW is on an order of magnitude of 100.

~~obtaining a count of the number of downloads currently being performed by the client.~~

8. (Currently Amended) A method according to claim 4~~6~~, wherein the weight of

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~~CPU utilization CPUW is on an order of magnitude of 1/10 wherein the step of determining a time for performing a download comprises sub-steps of:~~

- ~~— obtaining a plurality of measures of resource availability selected from a group consisting of measures of client computer resource availability and measures of communication resource availability;~~
- ~~— obtaining a set of weights corresponding to the plurality of measures of resource availability;~~
- ~~— calculating a weighted sum of the plurality of measures of resource availability using the set of corresponding weights; and~~
- ~~— comparing the weighted sum to a limit value.~~

9. (Currently Amended) A method for scheduling a download from a server computer to a client computer, the method on the client computer comprising steps of:

- checking a percentage of CPU utilization of a client computer;
- checking a ping response time between the client computer and ~~the~~ server computer; and
- obtaining a count at the client computer of a number of downloads currently underway.

10. (Original) A method according to claim 9, further comprising a step of:

- obtaining a weight corresponding to the percentage of CPU utilization;
- obtaining a weight corresponding to the ping response time;
- obtaining a weight corresponding to the count of the number of downloads currently underway;
- calculating a weighted sum of the percentage of CPU utilization, the ping response time, and the count of the number of downloads currently underway, using the weight corresponding to the percentage of CPU utilization, the weight corresponding to the ping response time, and the weight corresponding to the count of the number of downloads currently underway; and
- comparing the weighted sum to a limit value.

A.1) 11. (Currently Amended) A computer readable medium containing programming instructions for scheduling a download from a server computer to a client computer the programming instructions for execution on the client computer comprising:

obtaining a first threshold time value;
obtaining a second threshold time value;
pinging at least one server to calculate locally at the client computer a response time between the client computer and the server;
obtain percentage of CPU utilization of the client;
calculating a weighted result of the response time and the CPU utilization;
determining locally at the client computer a time for performing a download between the first threshold time value and the second threshold time value based on the weighted result.

12. (Currently Amended) A computer readable medium according to claim 11, wherein the programming instructions for determining a time further includes programming instructions for:

generating locally at the client computer ~~selecting~~ a random time between the first threshold time value and the second threshold time value.

13. (Currently Amended) A computer readable medium according to claim 14, wherein the programming instructions for generating locally at the client computer ~~selecting~~ a random time further includes programming instructions for:

~~selecting a random number; and~~
selecting a random time between the first threshold time value and the second threshold time value, based on the random number, the first threshold time value and the second threshold time value.

14. (Currently Amended) A computer readable medium according to claim 13,

wherein the programming instructions for determining at the time further includes programming instructions for:

obtaining one or measures of local resource availability at the client computer including a count of the number of other downloads underway; and
comparing the one or more measures to one or more corresponding preselected limits.

15. (Currently Amended) A method according to claim 14 wherein said programming instructions for ~~obtaining one or more measure~~ calculating of? a weighted result of the response time and the CPU utilization further includes programming instructions for:

~~obtaining one or more measures comprises a sub step of:~~

~~obtaining a measure of ping response time between the client and the server~~

calculating a weighted result of the response time and the CPU utilization and one or more measures of local resource availability.

16. (Currently Amended) A computer readable medium according to claim 14, wherein the programming instructions for calculating a weighted result ~~obtaining one or more measures~~ further includes programming instructions for:

calculating a weighted result using the equation of

$$\text{WS} = \text{PRT} * \text{PRTW} + \text{DC} * \text{DCW} + \text{CPU} * \text{CPUW}$$

wherein,

PRTW is the response time weight for pinging the server,

DC is the count of number of downloads underway,

DCW is a weight for the count of number of downloads underway,

CPU is the percentage of CPU utilization,

CPUW is a weight for the percentage of CPU utilization, and

WS is the weighted result

~~obtaining a measure of client computer percentage of CPU utilization.~~

17. (Currently Amended) A computer readable medium according to claim 14, wherein the response time weight of PRTW is on an order of magnitude

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~~of 100 programming instructions for obtaining one or more measures includes programming instructions for:~~

~~— obtaining a count of the number of downloads currently being performed by the client.~~

18. (Currently Amended) A computer readable medium according to claim 11, wherein the weight of CPU utilization CPUW is on an order of magnitude of 1/10~~the programming instructions for determining a time for performing a download comprises programming instructions for:~~

~~— obtaining a plurality of measures of resource availability selected from a group consisting of measures of client computer resource availability and measures of communication resource availability;~~

~~— obtaining a set of weights corresponding to the plurality of measures of resource availability;~~

~~— calculating a weighted sum of the plurality of measures of resource availability using the set of corresponding weights; and~~

~~— comparing the weighted sum to a limit value.~~

19. (Currently Amended) A computer readable medium comprising programming instructions for scheduling a download from a server computer to a client computer including programming instructions for execution on the client computer for:

checking a percentage of CPU utilization;

checking a ping response time between the client computer and the server;

obtaining a count of a number of downloads currently underway;

checking a percentage of CPU utilization of a client computer;

checking a ping response time between the client computer and a server computer; and

obtaining a count at the client computer of a number of downloads currently underway.

20. A computer readable medium according to claim 19, further comprising programming instructions for:

- obtaining a weight corresponding to the percentage of CPU utilization;
- obtaining a weight corresponding to the ping response time;
- obtaining a weight corresponding to the count of the number of downloads currently underway;
- calculating a weighted sum of the percentage of CPU utilization, the ping response time, and the count of the number of downloads currently underway, using the weight corresponding to the percentage of CPU utilization, the weight corresponding to the ping response time, and the weight corresponding to the count of the number of downloads currently underway; and
- comparing the weighted sum to a limit value.

21. (Currently Amended) A client information processing system comprising:

- a network interface;
- a client download scheduling intelligent agent for accepting specification from a user of a period during which a download is to be performed, and determining a time within the period for performing the download by pinging at least one server to calculate locally at a client computer a response time between the client computer and the server;
- obtain percentage of CPU utilization of the client;
- calculating a weighted result of the response time and the CPU utilization;
- determining locally at the client computer, a time for performing a download between the time period which the download is to be performed and the second threshold time value based on the weighted result.